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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Douglas D. FITZPATRICK *et al.*

Art Unit: 2817

Appl. No: 10/712,271

Examiner: *Unassigned*

Confirmation No: 7946

Filed: November 14, 2003

Atty. Docket No: 28549-198484

For: BI-PHASE MODULATOR FOR  
ULTRA WIDEBAND SIGNALS

Customer No:  
26694

**INFORMATION DISCLOSURE STATEMENT**

Commission for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

This is an Information Disclosure Statement submitted under 37 C.F.R. § 1.97 within the time specified under 37 C.F.R. § 1.97(c).

Attached is a PTO-Form 1449 listing the cited documents as well as one document cited in the enclosed International Search Report, where the relevance is indicated (copies enclosed). No further statement of relevance is required.

Pursuant to 37 C.F.R § 1.97(e)(1), on information and belief each item of information contained in this Information Disclosure Statement that was first cited in a communication from a foreign patent office in a counterpart foreign application was not cited more than three months prior to the filing of this Statement.

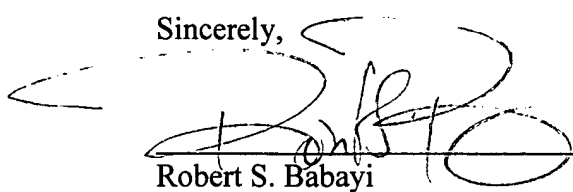
In view of the above, no further translation or statement of relevance is required, and as all requirements of 37 C.F.R. § 1.97 and all official guidelines pertaining to Information Disclosure Statements have been complied with, and it is therefore respectfully requested that the Examiner consider the documents and make them of record.

Should the remittance be inadvertently missing, or should any greater or lesser fee be required, please charge or credit our Deposit Account No. 22-0261 and advise us accordingly.

Sincerely,

Date

4/25/04

  
Robert S. Babayi

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VENABLE

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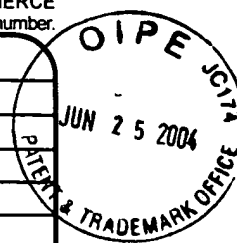
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|-------|---|----|---|
| Sheet | 1 | of | 2 |
|-------|---|----|---|

|                        |                     |
|------------------------|---------------------|
| Application Number     | 10/712,271          |
| Filing Date            | November 14, 2003   |
| First Named Inventor   | Douglas Fitzpatrick |
| Group Art Unit         | 2817                |
| Examiner Name          | Unassigned          |
| Attorney Docket Number | 28549-198484-       |

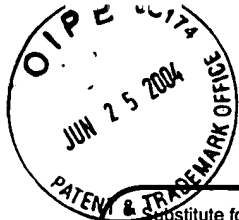
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Substitute for form 1449A/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 2 of 2

### Complete if Known

|                        |                     |
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| Application Number     | 10/712,271          |
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| First Named Inventor   | Douglas Fitzpatrick |
| Group Art Unit         | 2817                |
| Examiner Name          | Unassigned          |
| Attorney Docket Number | 2817                |

### OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

| Examiner<br>Initials * | Cite<br>No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T <sup>2</sup> |
|------------------------|--------------------------|---|----------------|
|                        |                          | Nishikawa et al., "Compact and Broad-Band Three Dimensional MMIC Balun", IEEE Transaction on Microwave Theory and Techniques, Vol. 47, No. 1, pp. 96-98 (1999)  |                |
|                        |                          | Ang et al., "Converting Baluns Into Broad-Band Impedance-Transforming 180 Hybrids", IEEE Transaction on Microwave Theory and Techniques, Vol. 50, No. 8, pp. 1990-95 (2002)   |                |
|                        |                          | Gokdemir et al., "Design and Performance of GaAs MMIC CPW Baluns Using Overlaid and Spiral Couplers", IEEE Transaction on Microwave Theory and Techniques, pp. 401-404 (1997)   |                |
|                        |                          | Gupta et al., "Microstrip Lines and Slotlines", ARTECH House Inc., pp. 231-55 (1979)  |                |
|                        |                          | Yoon et al., "Modeling of Monolithic RF Spiral Transmission-Line Balun", IEEE Transaction on Microwave Theory and Techniques, Vol. 49, No. 2, pp. 393-395 (2001)  |                |
|                        |                          | Womack, "The Use of Exponential Transmission Lines In Microwave Components", IRE Transaction on Microwave Theory and Techniques, pp. 124-132  |                |
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|                        |                          |   |                |
|                        |                          |   |                |
|                        |                          |   |                |

Examiner  
Signature

Date  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

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